VREX-0007USAAON00

REMARKS

The amendments herein do not introduce any new matter. It is believed that the claims herein should be allowable to Applicants. Accordingly, allowance is respectfully requested.

Claims 1-4, 6-9, 12, 24-26, 28-32 and 35 remain pending in the application. Applicants wish to thank the Examiner for the attention accorded to the instant application.

I. Claim Rejections – 35 U.S.C. §103

The Examiner has rejected claims 1-4, 6-10 and 12 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,074,708 to Onishi et al. ("Onishi") in view of U.S. Patent No. 4,974,941 to Gibbons et al. ("Gibbons"). The Examiner has additionally rejected claims 24, 25, 31, 32, 34 and 35 as being unpatentable over U.S. Patent No. 5,790,221 to Hsieh ("Hsieh") in view of Gibbons. The Examiner has additionally rejected claims 11 and 51 as being unpatentable over Onishi in view of Gibbons and further in view of U.S. Patent No. 4,778,259 to Kitayama et al. ("Kitayama"). The Examiner has rejected claims 26, 28-30 and 33 as being unpatentable over Hsieh in view of Gibbons and further in view of Onishi.

Applicants have amended claims 1 and 24 to more particularly point out and distinctly claim the subject matter regarded as the invention. In particular, the claims have been amended to recite that rubbing polyimide on the second plate is in a perpendicular direction to the direction of rubbing of the polyimide on the first plate. The present invention, as recited in the claims, is directed to a method for manufacturing

micropolarizers employing twisted nematic liquid crystal cells. Polyimide is coated on one surface of two plates and exposed to linearly polarized light. Subsequently, the polyimide is rubbed on the surface of a first plate in a predetermined direction. Subsequently, the polyimide is rubbed on the surface of a second plate in a direction perpendicular to the predetermined direction. The recited steps of the method result in a twisted nematic liquid crystal micropolarizer with noncontact and easy to pattern properties.

In contrast, the cited references have various deficiencies which, even when the references are combined with other cited references, fail to make the recited claims unpatentable. For instance, Onishi is directed to a photoinitiator and discloses conventional liquid crystal device manufacturing. Onishi does not teach or suggest exposing the plates to linearly polarized UV light. Similarly, Kitayama is directed to a ferroelectric liquid crystal device where the two plates have uniaxial orientation. There is no teaching or suggestion in Kitayama of twisted nematic liquid crystal micropolarizer nor any teaching or suggestion that polyimide is rubbed in a direction perpendicular to the direction of rubbing on a first plate. Similarly, Hsieh is directed to the manufacture of liquid crystal cells where the first plate is not exposed to the rubbing process at all. Similarly, Gibbons is directed to a process of aligning liquid crystal cells by anisotropically exposing the liquid crystal molecules to polarized light. There is no teaching or suggestion in Gibbons of aligning the liquid crystals by coating the surfaces with polyimide and rubbing in a certain direction. None of the cited references, either alone or in combination, disclose rubbing the polyimide in a second plate in a direction perpendicular to the direction of rubbing on the first plate.

Therefore, claims 1 and 24 are allowable over the cited references. Claims 2-4, 6-9, and 12, by their dependency on claim 1, are similarly allowable. Claims 25-26, 28-32 and 35, by their dependency on claim 24, are similarly allowable. Early notice to that effect is earnestly solicited.

II. Conclusion

For the foregoing reasons, Applicants respectfully submit that claims 1-4, 6-9, 12, 24-26, 28-32 and 35 are now in condition for allowance. Early notice to that effect is earnestly solicited.

Respectfully submitted,

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